

REMARKS

Reconsideration of this application is respectfully requested.

With respect to the restriction requirement, the Examiner is again respectfully requested to reconsider and withdraw the restriction requirement.

M.P.E.P. §2113 actually relates to patentability considerations not to proper restriction practice. Furthermore, even when patentability considerations under 35 U.S.C. §103 are at issue, M.P.E.P. §2113 specifically requires that:

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (holding "interbonded by interfusion" to limit structure of the claimed composite and noting that terms such as "welded," "intermixed," "ground in place," "press fitted," and "etched" are capable of construction as structural limitations.)

Accordingly, contrary to the Examiner's assertion, it is true that the product of the product claims here at issue can only be made by the claimed process of the respective parent claims. The Examiner's assertion that this argument is not "persuasive because the final structure of the product claims in Group I, whether this includes shared (*sic*) sheared edges of the coil pattern or not, is not limited to the process steps recited in Group II" is not understood. Clearly the structure implied by the process steps in a parent process claim does limit the claimed structure of the product claims 5 and 10 (Group I). Indeed, the section of the M.P.E.P. cited by the Examiner (§2113) actually supports the applicant's argument as noted above.

The Examiner's assertion that "patterning by coating can generate to some degree, sharp edges, depending on how the pattern is coated" is not supported by any factual showing and, in

any event, is either irrelevant or supports the applicant's argument. That is, even if it is true that coating can generate to some degree sharp edges, depending upon how the pattern is coated, it is still clear that the resulting product is different in structure from the product now being claimed which can only be created by the process of punching or cutting.

Accordingly, the Examiner is respectfully requested to reconsider and withdraw the outstanding restriction requirement.

With respect to the Examiner's withdrawal of claims 5, 8, 9 and 10 from further consideration as being drawn to a non-elected invention (there being no allowable generic or linking claim), the Examiner is requested to keep in mind the fact that claim 1 is generic to claim 5 and that claim 6 is generic to claims 8, 9 and 10. Accordingly, once these generic claims 1 and 6 are found allowable, it will be understood that the withdrawn claims should also be allowed.

In response to the rejection of claim 7 under 35 U.S.C. §112, second paragraph, claim 7 has been amended above under the provisions of 37 C.F.R. §1.116 so as to obviate this ground of formality-based objection.

The rejection of claims 1-4 under 35 U.S.C. §102 as allegedly anticipated by Henke '214 is again respectfully traversed. The new ground of rejection for claims 1-4 based on 35 U.S.C. §103 alleging that these claims are alternatively made "obvious" based on applicant's admitted prior art in view of Henke is also respectfully traversed.

The Examiner's refusal to give patentable weight to the preamble of claim 1 is believed to be erroneous. As explained at M.P.E.P. §2111.02, and in cases cited therein, the claim preamble is supposed to be given weight whenever the preamble is necessary to give life, meaning and vitality to the claim or otherwise deemed essential to point out the invention defined by the claims. For example, in *Korpa v. Robie* 187 Fed.2d 150, 152 (CCPA 1951), a

preamble reciting “an abrasive article” was deemed essential to point out the invention defined by claims to an article comprising abrasive grains and a hardened binder and the process of making it. As the court there stated “it is only by that phrase that it can be known that the subject matter defined by the claims is comprised as an abrasive article. Every union of substances capable *inter alia* of use as abrasive grains and a binder is not an ‘abrasive article’.” Therefore, the preamble served to further define the structure of the article produced in that case.

Furthermore, M.P.E.P. §2111.02(I). requires that “any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation”. More recent Federal Circuit cases are quoted (including a 1989 Federal Circuit case of *Corning Glassworks v. Sumitomo Electric USA, Inc.* 868 Fed.2d 1251) which explain that the determination of whether preamble recitations are structural limitations can be resolved only on review of the entirety of the application “to gain an understanding of what the inventors actually invented and intended to encompass by the claim”. Several other Federal Circuit cases to the same effect are quoted in the M.P.E.P. at this point.

Clearly applicant intended the preamble of claim 1 to be a limitation. As explained in considerable detail in the specification (and in applicant’s earlier submitted remarks of August 3, 2006), for various reasons there was a prejudice in the art against making magnetic resonance imaging spectroscopic (MRIS) shim coil structures in the claimed manner in the prior art. Only because the applicant recognized certain changes in the evolution of MRIS shim coil usage has it been discovered by the applicant that forming the required MRIS shim coil pattern in a sheet of electrically conductive material by cutting or punching is actually a preferable method of construction (as opposed to prior art construction techniques which included *inter alia* etching as noted in the specification).

The Examiner's reliance upon *In re Hirao*, 535 F.2d 67 (CCPA 1976) for the proposition that the preamble need not be given patentable weight is inapplicable for several reasons. First of all, the portion of this opinion relating to claim preambles is merely dicta. Secondly, the USPTO in this instance was the one actually alleging that the preamble had to be given weight--and was alleging that it had to be given weight in such a manner that it would broaden the scope of the claim. The CCPA in this context refused the USPTO's assertion that the preamble served to broaden the scope of the claim (thus making it more vulnerable to obviousness attacks). In that particular case, the CCPA found the preamble to merely recite the purpose of the process. Here, the preamble of claim 1 recites an important and integral part of the process. That is, applicant's claim is directed to a method for forming an electrical MRIS shim coil--not any other type or kind of coil.

Clearly Henke does not disclose any MRIS shim coil--nor any method for making such a coil. Accordingly, when claim 1 is properly construed, it is impossible for that claim to be anticipated by Henke '214.

Furthermore, since part of applicant's admitted prior art (AAPA) is conventional wisdom against the use of punching or cutting for forming MRIS shim coils, it is also clear that it would not be "obvious" within the meaning of 35 U.S.C. §103 to have used any cutting or punching process of Henke in the making of an MRIS shim coil. To the contrary, it would have cut against the teaching of the prior art. Such is the antithesis of "obviousness" under 35 U.S.C. §103.

The Examiner's comments as to why one of ordinary skill in the art of making MRIS shim coils would have found it "obvious" to have adopted the Henke process reveals the Examiner's misunderstanding of MRIS shim coils. MRIS shim coils are not used with any

magnetic core--whether open or closed. Accordingly, the Henke teaching referenced by the Examiner at page 1, column 15-30 [*sic* page 1, lines 15-30] are completely inapplicable to the situation presented by an MRIS shim coil. Indeed, those skilled in the practice of making MRIS shim coils would find it odd to have any consideration whatsoever of a "closed magnetic core".

The Examiner's continued refusal to give any patentable weight to the added limitations of claim 4 is also believed to be clearly erroneous. The applicant has not "selected" punching as opposed to cutting. Claim 1 is generic to either cutting or punching. Claim 4 further limits the recitations of claim 1 by requiring (a) cutting and (b) cutting by use of a laser or a water jet. The Examiner's refusal to consider these additional limitations of dependent claim 4 are believed to be erroneous. Once these additional limitations are considered, it is clear that there is no teaching or suggestion of this in the cited art relied upon for this ground of rejection.

The rejection of claims 6-7 under 35 U.S.C. §103 based on a three-way combination of Senda '170, JP '318 and AAPA is also respectfully traversed.

As already noted above, the AAPA referred to by the Examiner includes a specific prejudice not to go in the direction of applicant's claimed invention. Furthermore, both Senda and JP '318 are directed to the production of extremely small scale inductances formed on small chip-sized substrates suitable for use in printed circuit boards and the like. None of the cited prior art has anything whatever to do with methods for making much larger scale MRIS shim coils (except of course for the AAPA which teaches against use of applicant's claimed methods).

The Examiner's reference to Senda's coil as an electrical "shim" coil is without foundation. There is no teaching in Senda of any shim coil--let alone an MRIS shim coil. Furthermore, the coil inductor patterns 16a and 16b depicted at Figures 3 and 5 (two sandwich layers of the laminated structure disclosed in Senda) are explicitly formed by photo etching

methods and are thus specifically contrary to applicant's claims which require cutting or punching of a coil pattern.

The Examiner's allegation that items "1 or 15a or 15b" teach the cutting of a continuous sheet of electrically conductive material is not understood. Items 15a and 15b are clearly disclosed as insulating sheets (e.g. see 3:54). Item 1 is the entire substrate sandwich of encapsulated capacitors on which the further encapsulated inductor sandwich structures are to be formed.

The Examiner's reference to "adjacent as-cut positions" as somehow being found at Senda in Figure 3 and subsequently in Figure 7 is also not understood. The Senda process simultaneously forms six LC chips. All six are in one unitary structure until they are cut apart into individual chips as shown at Figure 7. However, the coil patterns 16a and 16b that are found sandwiched within the chip (on top of the capacitor substrate 1) are self-standing inductances in each of the 6 chips--i.e. they are not related to one another in the various six portions of the composite structure during construction and certainly not after being completely cut apart as six separate chips like the one depicted in Figure 7.

Indeed, the Examiner has recognized that Senda really only teaches photo etching for formation of the coil patterns 16a and 16b (citing to 4:15-44). However, the Examiner alleges that photo etching has now somehow become "cutting". Not only is this erroneous on its face, it also contradicts the Examiner's earlier assertions made in the Office Action dated 10/13/2006 where the Examiner found that the product of Group I can be made by a materially different process, such as one the [sic:] that forms the required coil pattern by deposition and coating techniques, e.g. plating, CVD, etc., as opposed to cutting or punching of conductive material, as required by Group II".

With respect to claim 7, the Examiner alleges to find a cutting step which leaves bridges of materials 18a as shown in Figures 4, 5 and 6. However, conductors 18a shown in these figures are actually conductive lead electrodes which are never removed but which are always in place to form ultimate final connections between the filter circuit chip and a printed circuit or the like. While it is true that these lead conductors are originally formed in the composite six-pack as being sufficiently wide so that they still exist (*albeit* narrower) after the six-pack is cut apart into individual chips as depicted at Figure 7. Of course, this final cutting apart of the six-pack into individual chips has nothing whatever to do with maintaining adjacent as-cut positions of any shim coil winding (or any other winding for that matter) nor does it have anything to do with a second cutting step which then cuts the bridges apart so as to completely form electrical separation between adjacent shim coil windings. Indeed, all of the windings of any given one of the inductors in Senda is completely encapsulated within the chip shown at Figure 7. The photo etching process which produces the coil patterns 16a and 16b has nothing whatever to do with the cutting apart of the composite six-pack into individual chips--including the cleaving of permanent lead electrodes 18b along the six-pack cleave lines.

The Examiner acknowledges that Senda doe not mention that his inductor windings are "MRIS shim coil windings". Indeed, Senda also does not mention those inductors as being any form of "shim" coil (contrary to the Examiner's description elsewhere).

The Examiner also recognizes that Senda does not use a laser beam to form any of its conductive patterns or to cut apart any of the conductors that are used. For this admitted deficiency, the Examiner relies upon JP '318. Of course, the Examiner is correct in noting that the generic use of lasers for cutting metals is conventional and well known. However, insofar as

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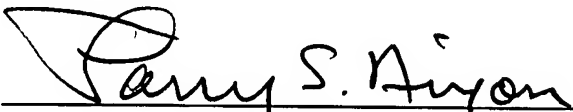
the Examiner refers to JP '318 printed inductances on a small chip as being any kind of "shim" coil that is in any way analogous to an MRIS shim coil, such an assertion is clearly erroneous.

The Examiner's comments concerning AAPA as somehow establishing it to be conventional to connect an MRIS shim coil winding "within the network" is not understood. While the small scale LC filters of Senda and/or JP '318 certainly are designed to be connected within a network (e.g. to act as low pass or high pass frequency selective filters or the like), they are not designed for the purpose of producing a magnetic field, *per se*. The Examiner's references to an "LC composite network" is also a bit unclear. So far as the undersigned can ascertain, the purpose of the coils in Senda and/or JP '318 is not to produce a magnetic field in a network but, instead, to provide suitable inductance/capacitance circuits for use as frequency selective filter circuits in a network of electronic components. Such is clearly is very far field from the art of making (or using) MRIS shim coils.

Accordingly, this entire application is now believed to be allowable and a formal notice to that effect is respectfully solicited.

Respectfully submitted,

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